

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number  
**WO 2005/078409 A1**

(51) International Patent Classification<sup>7</sup>: **G01N 15/02**

(21) International Application Number:  
PCT/KR2005/000401

(22) International Filing Date: 14 February 2005 (14.02.2005)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
10-2004-0009492  
13 February 2004 (13.02.2004) KR

(71) Applicant (for all designated States except US):  
**HYUNDAI CALIBRATION & CERTIFICATION  
TECHNOLOGIES CO., LTD** [KR/KR]; 136-1, San,  
Amili Bubaleup, Echunsi, Kyungki-do 467-866 (KR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **AHN, Kang-Ho**  
[KR/KR]; 102-1504, Ichon Apt., Ichon-dong, Yongsan-gu,  
Seoul 140-030 (KR).

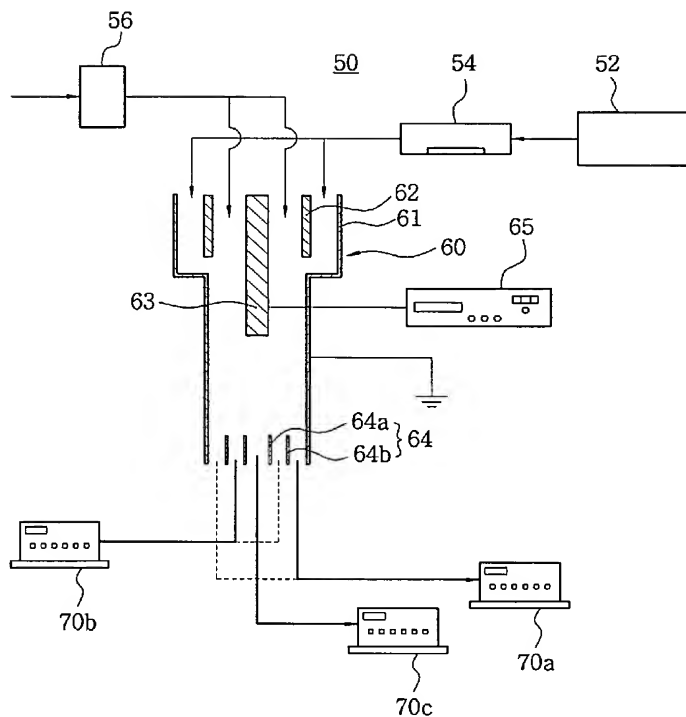
(74) Agent: **Dyne Patent & Law Firm**; 645-21, Yoksam-dong,  
Kangnam-gu, Seoul 135-080 (KR).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,  
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: APPARATUS FOR MEASURING NUMBERS OF PARTICLES AND METHOD THEREOF



(57) Abstract: The present invention discloses apparatus and method for rapidly and easily measuring the numbers and size distribution of low concentration particles which exist in a clean space such as a clean room. The apparatus and method according to the present invention measures the numbers of particles by charging particles to a monopolarity, collecting the particles by applying a voltage to an electrode and attaching the charged particles of a certain size or less thereto, separating the charged particles of the certain size or more according to size by the particle separating ducts. The apparatus for measuring the number of particles according to the present invention makes it possible to obtain a size distribution of particles in the air by a single measurement and to rapidly and easily measure it even though the number of the particles in the air is small.

WO 2005/078409 A1



**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*